

# **US-2/US-141/M-95 Access Management Action Plan**

## **TABLE OF CONTENTS**

	<u>Page</u>
<b>EXECUTIVE SUMMARY .....</b>	1
<b>Chapter One – INTRODUCTION.....</b>	1-1
Background.....	1-1
Introduction .....	1-1
Importance of Preserving the US-2/US-141/M-95 Corridor.....	1-1
Definitions & Benefits .....	1-3
Definition of Access Management.....	1-3
Access Management.....	1-3
Benefits of an Access Management Plan .....	1-3
Benefits of Access Management.....	1-5
Relationship to Local Master Plans and Zoning Ordinances .....	1-7
Process Followed to Create This Plan.....	1-7
Overview of Chapters in This Plan.....	1-8
<b>Chapter Two – GOALS AND OBJECTIVES OF PLAN .....</b>	2-1
Introduction .....	2-1
Achieving the Proper Balance.....	2-1
Goals.....	2-1
Objectives .....	2-1
<b>Chapter Three – ROAD DESCRIPTION, PROBLEM AND OPPORTUNITY ANALYSIS</b>	<b>3-1</b>
Introduction .....	3-1
Corridor Roadway Description .....	3-2
Roadway Geometry and Speed.....	3-2
Traffic and Safety Analysis.....	3-3
Crash Analysis.....	3-4
Key Access Management Concepts.....	3-5
Limit the Number of Driveways .....	3-5
Speed Progression.....	3-5
Environmental Features and Conditions .....	3-7
Scenic and Aesthetic Considerations .....	3-8
Principal Roadway and Driveway Design Standards .....	3-9
Capacity Improvements.....	3-9
Other Intersection Safety Improvements .....	3-12
Access Management Improvements.....	3-13
<b>Chapter Four – PROPOSED IMPROVEMENTS AND RATIONALE .....</b>	<b>4-1</b>
Introduction .....	4-1
Recommended Improvements .....	4-1
US-2 from the West Dickinson County Line .....	4-2
M-95 from Wisconsin/Michigan State Line North through Kingsford to US-2.	4-19
US-141 from Wisconsin/Michigan State Line North to US-2 .....	4-21
Proposed Bus, Bicycle, Pedestrian, Transit, and Snowmobile Improvements .....	4-22

Pedestrian Systems.....	4-22
Recreation Trails .....	4-24
Transit.....	4-27
Display of Goods and Signs in Right-of-Way.....	4-27
<b>Chapter Five – COORDINATING LOCAL PLANNING AND ZONING STANDARDS.....</b>	<b>5-1</b>
Introduction .....	5-1
Description of Zoning Elements to Examine.....	5-1
Comparison of Current Land Use, Zoning and Future Land Use Maps for Jurisdictions in US-2/US-141/M-95 Study Area.....	5-1
Planning Efforts Along the Corridor .....	5-2
Comparison of Current Land Use Maps, Composite Zoning Map and Future Land Use Maps .....	5-2
Compatibility of Zoning Ordinance.....	5-4
Density and Frontage .....	5-4
Sign Requirements .....	5-26
Parking Lot and Driveway Requirements .....	5-26
Landscaping Requirements .....	5-26
Lighting Requirements .....	5-26
Access Management Requirements .....	5-26
Recommendations.....	5-31
Planning and Zoning .....	5-31
Access Management .....	5-31
Aesthetics .....	5-33
<b>Chapter Six – IMPLEMENTATION.....</b>	<b>6-1</b>
Introduction .....	6-1
Road Improvements .....	6-1
Access Management .....	6-2
Remedial Measures.....	6-3
Preventive Measures.....	6-4
Coordinated Permit Reviews.....	6-4
Coordinated Capital Improvement Planning.....	6-6

## LIST OF TABLES

<b>Table Number</b>		<b>Page</b>
3-1	MDOT 1994-2003 Average AADT Traffic Volume 24 Hour Count.....	3-3
3-2	Serious Crash Locations Along US-2/US-141/M-95 .....	3-4
3-3	Relationship of Driveway Density to Crash Rates.....	3-5
4-1	Guideline for Unsignalized Driveway Spacing .....	4-2
5-1	Zoning Comparisons.....	5-21
5-2	Sign and Parking Requirements .....	5-28
5-3	Access Management, Landscaping and Lighting Regulations .....	5-30

## LIST OF FIGURES

<b>Figure Number</b>		<b>Page</b>
1-1	Location of Jurisdictions Along the US-2/US-141/M-95 Study Area.....	1-1
1-2	US-2/US-141/M-95 Within the Upper Peninsula .....	1-2
1-3	Traffic Improve and Expand Cycle .....	1-4
1-4	Land Use and Transportation Agency Authority .....	1-5
1-5	Use of Land Adjacent to Roadways .....	1-6
3-1	Location Map.....	3-1
3-2	Driveway Crashes by Movement.....	3-6
3-3	Consolidated Sign .....	3-8
3-4	Indirect U-Turn .....	3-10
3-5	Roundabout Example .....	3-12
3-6	Creating a "T" Intersection .....	3-12
3-7	Shared Driveways and Connected Parking Lots.....	3-14
3-8	Frontage Roads and Rear Service Roads .....	3-15
5-1	Limit the Number of Driveways by "Locking In" Driveways.....	5-32
5-2	Sight Distance at Intersection .....	5-34
6-1	Typical and Preferred Review and Approval Process.....	6-5

## LIST OF MAPS

<b>Map Number</b>		<b>Page</b>
4-1	Recommendations: North Breitung Twp. and North Iron Mountain .....	4-13
4-2	Recommendations: Iron Mountain & Kingsford Cities & Southwest Breitung Township .....	4-14
4-3	Recommendations: Southeast Breitung Township .....	4-15
4-4	Recommendations: Norway City and Southwest Norway Township.....	4-16
4-5	Recommendations: Southeast Norway & Southwest Waucedah Townships ..	4-17
4-6	Recommendations: Southeast Waucedah Township .....	4-18
4-7	Recreational Trails Map .....	4-26
5-1	Current Land Use: North Breitung Township and North Iron Mountain .....	5-6
5-2	Current Land Use: Iron Mountain & Kingsford Cities and Southwest Breitung Township .....	5-7
5-3	Current Land Use: Southeast Breitung Township.....	5-8
5-4	Current Land Use: Norway City & Southwest Norway Township .....	5-9
5-5	Current Land Use: Southeast Norway & Southwest Waucedah Townships....	5-10
5-6	Current Land Use: Southeast Waucedah Township.....	5-11
5-7	Composite Zoning: North Breitung Township and North Iron Mountain .....	5-12
5-8	Composite Zoning: Iron Mountain & Kingsford Cities and Southwest Breitung Township .....	5-13
5-9	Composite Zoning: Southeast Breitung Township .....	5-14
5-10	Composite Zoning: Norway City & Southwest Norway Township .....	5-15
5-11	Composite Zoning: Southeast Norway & Southwest Waucedah Townships ...	5-16
5-12	Composite Zoning: Southeast Waucedah Township.....	5-17
5-13	Iron Mountain Future Land Use Map.....	5-18
5-14	Kingsford Future Land Use Map.....	5-19
5-15	Norway Future Land Use Map.....	5-20

## TABLE OF CONTENTS

continued

## LIST OF PHOTOS

<u>Photo Number</u>		<u>Page</u>
3-1	Poorly Defined Ingress and Egress.....	3-7
3-2	Swede Settlement Road Intersects US-2.....	3-8
3-3	Landscaping Along Highway .....	3-9
3-4	Narrow Width Median on US-2/US-141/M-95 .....	3-11
4-1	Highest Crash Intersection: Looking South at US-2/US-141 at H St.....	4-12
4-2	Highest Crash Intersection: Looking North at US-2/US-141 at H St. ....	4-12
4-3	M-95 Southbound in Kingsford: Parking Lot Snow is Properly Setback from the Highway .....	4-20
4-4	US-141 at Breitung Avenue Looking South .....	4-21
4-5	US-141 at Breitung Avenue Looking North from East Side of Breitung Avenue .....	4-22
4-6	Sidewalk too Close to Street.....	4-23
4-7	Raised Curbs Instead of Sidewalks .....	4-23
4-8	Pedestrian Tunnel While Under Construction in Houghton in 2003 .....	4-24
4-9	Bicyclist Braves Zero Degrees in Iron Mountain .....	4-25
4-10	Display of Sign in Right-of-Way.....	4-27

## APPENDICES

**Appendix A** – Resolution and Memorandum of Understanding

**Appendix B** – Sample Access Management Ordinance

**Appendix C** – Sample Master Plan Amendment